From: Dorsey, Nancy

Sent: Monday, September 12, 2016 4:10 PM

To: R6 6WQ-SG; Moore, Jessica; Lane, Willie; Aguinaga, David; Gee, Randy; Charles Lord;

Jim Marlatt

Subject: unofficial well map

Attachments: OK_Osage_unofficial_updated.jpg; OsageCo19Wells.zip; DI_Arbuckle_09122016_

19wells.xlsx

Importance: High

EPA 19 wells

Nancy S. Dorsey Environmental Scientist Oklahoma Class II Program Manager WQ-SG EPA Region 6 1445 Ross Ave. #1200 Dallas, TX 75202-2733 214-665-2294 FAX 214-665-2191

UIC Webpages:

http://www.epa.gov/uic/underground-injection-control-epa-region-6-ar-la-nm-ok-and-tx

http://www.epa.gov/uic/guidance-documents-completing-class-i-injection-well-no-migration-petitions

Managing and Minimizing Potential of Injection-Induced Seismicity from Class II Disposal: Practical

Approaches: http://www.epa.gov/uic/underground-injection-control-national-technical-workgroup-final-issue-papers

From: Matt Skinner < M.Skinner@occemail.com>
Sent: Monday, September 12, 2016 1:49 PM

To: Austin Holland; Boak, Jeremy M.; Chad Warmington; Chang, Jefferson C.; Charles Lord;

Crain, Kevin D.; Daniel E McNamara; Fred Jordan; todd.halihan@okstate.edu; Jay Marks; Jim Palmer; Katie Altshuler; Kim Hatfield; Michael McNutt; Michael Teague; Mike Paque;

'Mike Terry'; 'Mindy Stitt (mstitt@oerb.com)'; Dorsey, Nancy; OG Field;

okoga@okoga.com; Tapp, Bryan; Tim Baker; Tim Rhodes; Tom Robins; Williams, Robert; Bob Anthony; Dana Murphy; Jackie Hollinhead; Jana Slatton; Joseph Briley; Joyce Boyd;

Nicole King; Teryl Williams; Todd Hiett

Subject: draft

Attachments: 09-12-16BULLET DRAFTa.doc

Draft of bullet points for today's OCC/OGS news conference

From: Charles Lord < C.Lord@occemail.com>
Sent: Monday, September 12, 2016 1:48 PM

To: Dorsey, Nancy

Subject: Pawnee Final Letter 09-12-2016 **Attachments:** Pawnee Final Letter 09-12-2016.docx

From: Dorsey, Nancy

Sent: Monday, September 12, 2016 1:43 PM **To:** 'Matt Skinner'; Boak, Jeremy M.; Gray, David

Subject: RE: new draft

19 wells in EPA jurisdiction, one of the 20 is already plugged.

From: Matt Skinner [mailto:M.Skinner@occemail.com]

Sent: Monday, September 12, 2016 1:42 PM

To: Boak, Jeremy M. <jboak@ou.edu>; Gray, David <gray.david@epa.gov>

Subject: new draft

Adds OGS, USGS, updates numbers.

From: Matt Skinner < M.Skinner@occemail.com>
Sent: Monday, September 12, 2016 1:43 PM

To: Gray, David; Boak, Jeremy M.

Subject: disregard

Attachments: News from the Oklahoma Corporation Commission.doc

Disregard items just sent – here is latest draft

From: Dorsey, Nancy

Sent: Monday, September 12, 2016 1:42 PM

To: Charles Lord; Jim Marlatt **Subject:** FW: WORKING Osage well list

Attachments: OK_Osage_unofficial_updated.jpg; Osage22WellsShapefil.zip; DI_Arbuckle_09072016_

20wells_PLUS2_maybe.xlsx

Importance: High

We are NOT including the two wells out-of-the polygon. One of the wells is PA OS0811 and can be deleted.

From: Dorsey, Nancy

Sent: Sunday, September 11, 2016 7:43 PM

To: R6 6WQ-SG <R6_6WQSG@epa.gov>; Lane, Willie <Lane.Willie@epa.gov>; Aguinaga, David

<Aguinaga.David@epa.gov>; Moore, Jessica <Moore.Jessica@epa.gov>; Brown, Jamesr

depa.gov>; Jim Marlatt <J.Marlatt@occemail.com>; Phillip Bailey (P.Bailey@occemail.com) <P.Bailey@occemail.com>; Ron Clymer

(R.Clymer@occemail.com) <R.Clymer@occemail.com>; Vicente Vasquez <V.Vasquez@occemail.com>

Subject: WORKING Osage well list

It appears two wells have been added. One had dropped from our database by mistake. The other is just outside the polygon. That makes two technically outside the polygon. If we drop those off and add the new one in the reduced area our count will remain the same, but the list and map will change.

Decision?

Nancy S. Dorsey Environmental Scientist Oklahoma Class II Program Manager WQ-SG EPA Region 6 1445 Ross Ave. #1200 Dallas, TX 75202-2733 214-665-2294 FAX 214-665-2191

UIC Webpages:

http://www.epa.gov/uic/underground-injection-control-epa-region-6-ar-la-nm-ok-and-tx http://www.epa.gov/uic/guidance-documents-completing-class-i-injection-well-no-migration-petitions

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Approaches: http://www.epa.gov/uic/underground-injection-control-national-technical-workgroup-final-issue-papers

From: Dorsey, Nancy

Sent: Monday, September 12, 2016 1:31 PM

To: 'Matt Skinner'; Gray, David

Subject: RE: draft bullet points, map, op list

The map is missing a new reduction area well. I sent the info to Charles and Jim on Sunday, but I can't reach them by phone. In a meeting text me 214-796 4065

-----Original Message-----

From: Matt Skinner [mailto:M.Skinner@occemail.com]

Sent: Monday, September 12, 2016 1:07 PM To: Gray, David <gray.david@epa.gov> Subject: draft bullet points, map, op list

Please see attached - let me know of any issues

From: Matt Skinner < M.Skinner@occemail.com>
Sent: Monday, September 12, 2016 12:27 PM

To: Austin Holland; Boak, Jeremy M.; Chad Warmington; Chang, Jefferson C.; Charles Lord;

Crain, Kevin D.; Daniel E McNamara; Fred Jordan; todd.halihan@okstate.edu; Jay Marks; Jim Palmer; Katie Altshuler; Kim Hatfield; Michael McNutt; Michael Teague; Mike Paque;

'Mike Terry'; 'Mindy Stitt (mstitt@oerb.com)'; Dorsey, Nancy; OG Field;

okoga@okoga.com; Tapp, Bryan; Tim Baker; Tim Rhodes; Tom Robins; Williams, Robert; Bob Anthony; Dana Murphy; Jackie Hollinhead; Jana Slatton; Joseph Briley; Joyce Boyd;

Nicole King; Teryl Williams; Todd Hiett

Subject: FW: Emailing: Pawnee 09-10-2016 JM CL 12 LABELS

Attachments: Pawnee_09-10-2016_JM CL 12 LABELS.pdf

Here is the latest AOI map. It will be released in a simpler form at the news conference

----Original Message-----From: Charles Lord

Sent: Monday, September 12, 2016 12:23 PM

To: Tim Baker; Matt Skinner

Subject: Emailing: Pawnee_09-10-2016_JM CL 12 LABELS

Map with labels

Your message is ready to be sent with the following file or link attachments:

Pawnee 09-10-2016 JM CL 12 LABELS

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

From: Dorsey, Nancy

Sent: Monday, September 12, 2016 10:45 AM To: Tim Baker; Charles Lord; Jim Marlatt

Cc: Phillip Bailey (P.Bailey@occemail.com); Vicente Vasquez; Ron Clymer

(R.Clymer@occemail.com); Martin Emery; Dellinger, Philip; Sanborn, Kent; Hurlbut, Bill;

Tingey, Christopher; Moore, Jessica; Aguinaga, David

Subject: Osage wells and Pawnee related

Good morning folks,

At the conference call last Friday, a list of items needed/required for the key wells was discussed. How is that coming, please?

Of the working list I sent yesterday, the plan (at this instant) is to drop the two wells that are just outside the polygon. Only the OS5115 was ever mentioned, so it will need to be explained why it was dropped. OS6218 never made an official EPA list, so it can just be excluded. The OS0811 can be listed, but it has been plugged for years. OS6387 is currently producing, but we are leaving it on the list for now as the permit has not yet been permitted.

Enforcement is working on calculating the new rates. They have about half the data from the operators as of this moment. Hardcopies are being scanned and will be uploaded to the sharepoint site periodically.

On the Sharepoint site, if you have trouble give me a call....after you receive the email on the link. ©

Cheers, Nancy

Nancy S. Dorsey Environmental Scientist Oklahoma Class II Program Manager WQ-SG EPA Region 6 1445 Ross Ave. #1200 Dallas, TX 75202-2733 214-665-2294 FAX 214-665-2191

UIC Webpages:

http://www.epa.gov/uic/underground-injection-control-epa-region-6-ar-la-nm-ok-and-tx http://www.epa.gov/uic/guidance-documents-completing-class-i-injection-well-no-migration-petitions Managing and Minimizing Potential of Injection-Induced Seismicity from Class II Disposal: Practical

Approaches: http://www.epa.gov/uic/underground-injection-control-national-technical-workgroup-final-issue-papers

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Crain, Kevin D.; Daniel E McNamara; Fred Jordan; todd.halihan@okstate.edu; Jay Marks; Jim Palmer; Katie Altshuler; Kim Hatfield; Michael McNutt; Michael Teague; Mike Paque;

'Mike Terry'; 'Mindy Stitt (mstitt@oerb.com)'; Dorsey, Nancy; OG Field;

okoga@okoga.com; Tapp, Bryan; Tim Baker; Tim Rhodes; Tom Robins; Williams, Robert; Bob Anthony; Dana Murphy; Jackie Hollinhead; Jana Slatton; Joseph Briley; Joyce Boyd;

Nicole King; Teryl Williams; Todd Hiett

Subject: news conference

The OCC's Oil and Gas Conservation Division will hold a news conference at 3 p.m., 2101 N. Lincoln, OKC, Room 301 at 3 p.m. to discuss the latest action plan for the Pawnee area. If you would like to listen in – I will be sending out a conference number as soon as it is assigned.

Matt

From: Dorsey, Nancy

Sent: Sunday, September 11, 2016 7:43 PM

To: R6 6WQ-SG; Lane, Willie; Aguinaga, David; Moore, Jessica; Brown, Jamesr; Jim Marlatt;

Phillip Bailey (P.Bailey@occemail.com); Ron Clymer (R.Clymer@occemail.com); Vicente

Vasquez

Subject: WORKING Osage well list

Attachments: DI_Arbuckle_09072016_20wells_PLUS2_maybe.xlsx; OK_Osage_unofficial_updated.jpg;

Osage22WellsShapefil.zip

It appears two wells have been added. One had dropped from our database by mistake. The other is just outside the polygon. That makes two technically outside the polygon. If we drop those off and add the new one in the reduced area our count will remain the same, but the list and map will change.

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Nancy S. Dorsey Environmental Scientist Oklahoma Class II Program Manager WQ-SG EPA Region 6 1445 Ross Ave. #1200 Dallas, TX 75202-2733 214-665-2294 FAX 214-665-2191

UIC Webpages:

http://www.epa.gov/uic/underground-injection-control-epa-region-6-ar-la-nm-ok-and-tx http://www.epa.gov/uic/guidance-documents-completing-class-i-injection-well-no-migration-petitions

Managing and Minimizing Potential of Injection-Induced Seismicity from Class II Disposal: Practical

Approaches: http://www.epa.gov/uic/underground-injection-control-national-technical-workgroup-final-issue-papers

From: Jim Marlatt < J.Marlatt@occemail.com>
Sent: Friday, September 09, 2016 4:10 PM

To: ogvolumes; Charles Lord; Tim Baker; Julie Shemeta; Dorsey, Nancy

Subject: FW: Areas from your slides

Attachments: removed.txt; County Groupings 090916.pdf

Thank you, and have a great day.

Jim Marlatt

Oil and Gas Specialist - Seismicity Oklahoma Corporation Commission 2101 N. Lincoln Boulevard, Room 214 Oklahoma City, OK 73105 405.522.2758 j.marlatt@occemail.com



From: Boak, Jeremy M. [mailto:jboak@ou.edu] **Sent:** Friday, September 09, 2016 3:12 PM

To: Jim Marlatt

Subject: Re: Areas from your slides

Jim

Here they are

Jeremy Boak, Director
Oklahoma Geological Survey
Mewbourne College of Earth & Energy
University of Oklahoma
Sarkeys Energy Center, N119
100 E. Boyd Street
Norman OK 73019
405-325-7968
jboak@ou.edu

From: Jim Marlatt < J.Marlatt@occemail.com>
Date: Friday, September 9, 2016 at 11:24 AM

To: Jeremy Boak <jboak@ou.edu> **Subject:** Areas from your slides

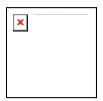
Jerry,

I forgot to ask you for it during the workshop, but could you send me the outlines for the areas you had the state divided into, regarding earthquake area. It had 5-7 different zones. We want to look at the different reduction areas during our review, using the same zones you had identified in the slide.

Thank you, and have a great day.

Jim Marlatt

Oil and Gas Specialist - Seismicity Oklahoma Corporation Commission 2101 N. Lincoln Boulevard, Room 214 Oklahoma City, OK 73105 405.522.2758 j.marlatt@occemail.com



From: Sanborn, Kent

Sent: Friday, September 09, 2016 3:17 PM

To: Saunders, Jerry; Lane, Willie; Coleman, Sam; Dellinger, Philip; Dorsey, Nancy

Subject: Scout Energy inspections 9/9/2016

Jerry:

Here is a summary of what I found today on the Scout wells. There are four wells total not 5 as believed earlier.

OS 6170: SE 32-25-6. Wilson15D-32. Injecting at 30 psi vacuum about 3,000 bwpd. Same as Tuesday 9/6/2016 inspection.

OS 6063: NE 9-24-6. Farmland Reserve No. 6-9. Injecting at 30 psi vacuum about 3,000 bwpd. Same as Tuesday inspection.

OS 6056: NE 17-24-6. King No. 2D-17. Well is shut in on line. Wellhead is open. Gauge reading is 15 psi vacuum. Same as Tuesday inspection.

OS 6009: NW 22-24-6. Williams 7D-22. Injecting at 10 psi vacuum about 600 bwpd (meter). Inspection on Tuesday showed the well shut in.

Three of the 4 wells are injecting. The Williams well was turned on between now and Tuesday.

I also inspected the 3 additional wells Nancy added to the list of 17.

OS 0811: The well is plugged and the tank battery has been removed.

OS 6387: The well has a pump jack on it and part of the tubing has been pulled. There is a plug in the top of the tubing. It is not hooked up to inject. The operator is using No. 1 one location north of here for his disposal.

OS 6424: The well is injecting at 10 psi about 250 bwpd (metered).

Also discovered another Arbuckle well in SE NW NE 32-25-6 owned by Jericho Operating that is injecting at 2000 bwpd at 30 psi vacuum. This well may have been mistakenly dropped from the inventory. Jessica Moore is investigating whether or not the well should be part of the larger group of wells.